

Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 11/13/12 at 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work with other technical teams. DOSS notes and advice can be found at: <http://www.swr.noaa.gov/ocap/doss.htm>.

DWR: Mike Ford, Edmund Yu, James Gleim, Kevin Reece, Andy Chu, Tracy Pettit

FWS: Craig Anderson

NMFS: Barb Byrne, Garwin Yip, Jeff Stuart, Barbara Rocco

Reclamation: Russ Yaworsky, Josh Israel

DFG: Robert Vincik, Krystal Acierto, Jason Roberts, Bob Fujimura

EPA, SWRCB, USGS: not present

Agenda

1. Fish monitoring
2. Current operations
3. Update on genetic analysis of WR-sized Chinook in salvage (2011–2012) (Reece)
4. Possible workshop/call about current status of salvage database

Fish Monitoring: The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. See:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>.

| Location | Chippis Is. Midwater Trawl | Sacramento Trawls | Mossdale Kodiak Trawl | Beach Seines | Knights Landing RST | Tisdale Weir RST |
|-----------------------|----------------------------------|----------------------|-----------------------------|-----------------|------------------------|------------------|
| Sample Date | 11/5, 7, 9 | 11/5, 7, 9 | 11/5, 7, 9 | 11/5–11/9 | 11/5, 7, 9, 12 | 11/5, 7, 9, 12 |
| Total Catch | 0 | 0 | 0 | 0 | 0 | 0 |
| FR | | | | | | |
| WR | | | | | | |
| SR | | | | | | |
| LFR | | | | | | |
| Ad-Clipped Chinook | | | | | | |
| DS | | | | | | |
| Splittail | | | | | | |
| Longfin | | | | | | |
| SH (ad-clip) | | | | | | |
| SH (wild) | | | | | | |
| W. Temp. (avg. °F) | 62.4 | 59.4 | 61.3 | 60.4 | 58.0 | 58.0 |
| Flows (avg. | | | | | 4,547 | 4,925 |

| | | | | | | |
|---------------------------------|------|-----|------|------|-----|-----|
| cfs) | | | | | | |
| Turbidity (avg. NTU) | 15.2 | 5.9 | 10.7 | 11.8 | 8.2 | 5.9 |
| WR/LFR Avg. CPUE | | | | | | |
| FR/SR Avg. CPUE | | | | | | |

Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; CPUE = catch per unit of effort

Fish Monitoring: No fish have been sampled at either Tisdale or Knights Landing during this reporting period; temperatures are dropping but flows are not yet increasing. Forecasted precipitation later this week should help increase flows and may trigger some downstream movement of juvenile salmonids. On the Stanislaus River, more than 5,800 fall-run have passed the Stanislaus weir, the highest escapement observed since the weir counts began in 2003. One *O. mykiss*, <16 inches moved upstream past the weir on the Stanislaus River on Saturday.

One of the adult fall-run Chinook salmon acoustically tagged in the San Joaquin River in the western Delta as part of the “Mokelumne hatchery straying study” was recovered at the Nimbus hatchery on the American River and was determined to be from the Mokelumne hatchery. Acoustic receivers located in the Delta and near the Delta Cross Channel will provide information about what route it took from the San Joaquin River into the American River. Last year, there were 25 returning adult fall-run Chinook salmon tagged and 8 were recovered. Data on 21 of those were available for tracking. This year, 56 adult fall-run Chinook salmon were tagged.

A 311-mm non-clipped Chinook of undetermined race (a fish of this size is “off the chart” of the length-at-date table used to assign race) was salvaged at the CVP last Thursday. Chinook salmon >300 mm FL are not reported as “older juvenile” Chinook salmon. There will be genetic testing on this individual to determine race.

NOTE: DAT data were not available before the call because of yesterday’s holiday. Yu (DWR) will send out graphs later and we will append them to today’s notes. For additional graphs, please visit the DWR website at:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>.

Operations (11/13/12)

Operations (11/16/12)

| SWP | | CVP | |
|--------------------------|--------------------------------|----------------------|---|
| Exports (cfs) | | | |
| Clifton Court Forebay | 1,500 (down to 1,000 tomorrow) | Jones Pumping Plant | 4,200 (down to 3,500 tomorrow and until more water comes in) |
| Reservoir Releases (cfs) | | | |
| Feather - Oroville | 2,400 | Nimbus | 1,850 (will remain through December barring flood control issues) |
| | | Sacramento - Keswick | 6,000 |
| | | Stanislaus - Goodwin | 275 (will remain until |

| | | | |
|--|------------------------|-------------------------------------|------------------------|
| | | | 12/15) |
| Reservoir Storage (in TAF, % of capacity) | | | |
| San Luis (SWP) | 274 (26) | San Luis (CVP) | 432 (45) |
| Oroville | 1,787 | Shasta | 2,414 |
| New Melones | | Folsom | 370 |
| | | | |
| Delta Operations | | | |
| DCC | Open | Sacramento River at Freeport (cfs) | 9,030 (on the decline) |
| Outflow Index (cfs) | 3,600 | San Joaquin River (cfs) at Vernalis | 1,255 |
| Total Delta Inflow (cfs) | 10,782 | OMR (daily) (cfs) | |
| Water Temperature (°F) | | OMR 5 day (cfs) | |
| X2 (km) | 81 | OMR 14 day (cfs) | |
| E/I (%) | 51.2 (standard is 65%) | | |

Weather Forecast: The storm forecasted to come later this week might be warmer and lead to more runoff than the most recent storm, which was colder, with precipitation that fell mostly as snow. The snow elevation is down to about 4,000 feet. DWR is watching Rio Vista flows. As Freeport continues to drop, Rio Vista flows are approaching the minimum flow standard in D-1641, which is 4,500 cfs on a monthly average basis and 3,500 cfs on a 7-day average. Yesterday, the flows were 3,877 cfs. The D-1641 flow standards are controlling export operations right now. During the last week in November, DWR might close the DCC gates to help meet the Rio Vista standard; closing the gates keeps more flow in the Sacramento River and will increase flows at Rio Vista.

Winter-Run Chinook Genetic Study: DWR reported out on the genetic analysis of salvaged Chinook from 2011–2012, for winter-run-sized Chinook only. The analysis considered two genetic baselines used to assign fish to race; one developed by the NMFS Southwest Fisheries Science Center and the other developed by UC, Davis. All Chinook outside of the winter-run size class are being analyzed, but the results are not yet available. For the SWP in 2011, of the 259 winter-run-sized fish sampled, 33.59% or 86 fish were genetic winter run; for 2012, of the 110 winter-run-sized fish sampled, 41.51% or 44 fish were genetic winter run. The following table was summarized on the DOSS call and provided to the group after the call.

Table 1: Genetic assignment summary of Chinook salmon collected at salvage that fell within the winter run length-at-date model criteria.

| Tissue Archive | | Genetic Analysis | | | | |
|----------------|----------|------------------|--------|------------|-------|----------|
| Site | Received | Non-winter | Winter | Unassigned | Total | % Winter |
| 2011 CVP | 92 | 60 | 30 | 2 | 92 | 33.33% |
| 2012 CVP | 142 | 105 | 32 | 5 | 142 | 23.36% |
| 2011 SWP | 259 | 170 | 86 | 3 | 259 | 33.59% |
| 2012 SWP | 110 | 62 | 44 | 4 | 110 | 41.51% |
| Total | 603 | 397 | 192 | 14 | 603 | 32.60% |

March tends to be the month during which there are a lot of Chinook salmon races mixing. A lot are in the 120- to 150-mm range, which might be a bit big for hatchery fish; therefore, they are most likely wild stock. Brett Harvey (DWR) will produce a report that will include the SWP summary of 10-year data. We are also analyzing a subset of the non-winter run sized Chinook samples from 2011 and 2012 and should get a summary report on these data before the end of the year.

Salvage Database: The group discussed some suggestions for the DFG salvage database.

Byrne (NMFS) will look at the list of suggestions that DOSS put together last year of what people might want to see in the database, add the current suggestions, and share with the group for review and comment.

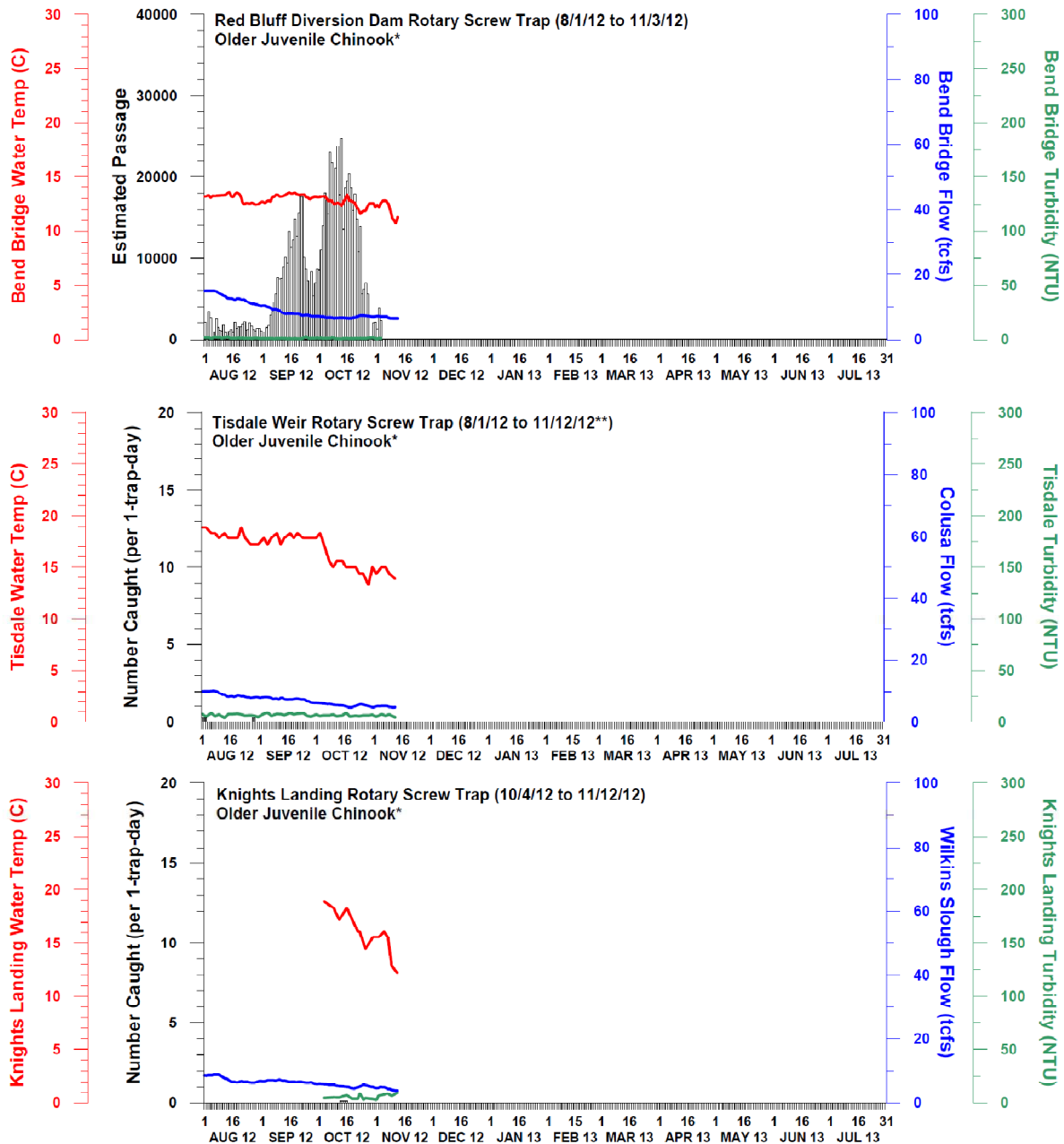
DOSS advice to WOMT and NMFS: None.

Next Meeting: The next DOSS conference call meeting is scheduled for 11/20/12 at 9:00 a.m.

Appendix A.

The following graphs were submitted after the DOSS conference call but all participants agreed that we would append them to these notes.

NUMBER OF OLDER JUVENILE CHINOOK MEASURED IN THE SACRAMENTO RIVER



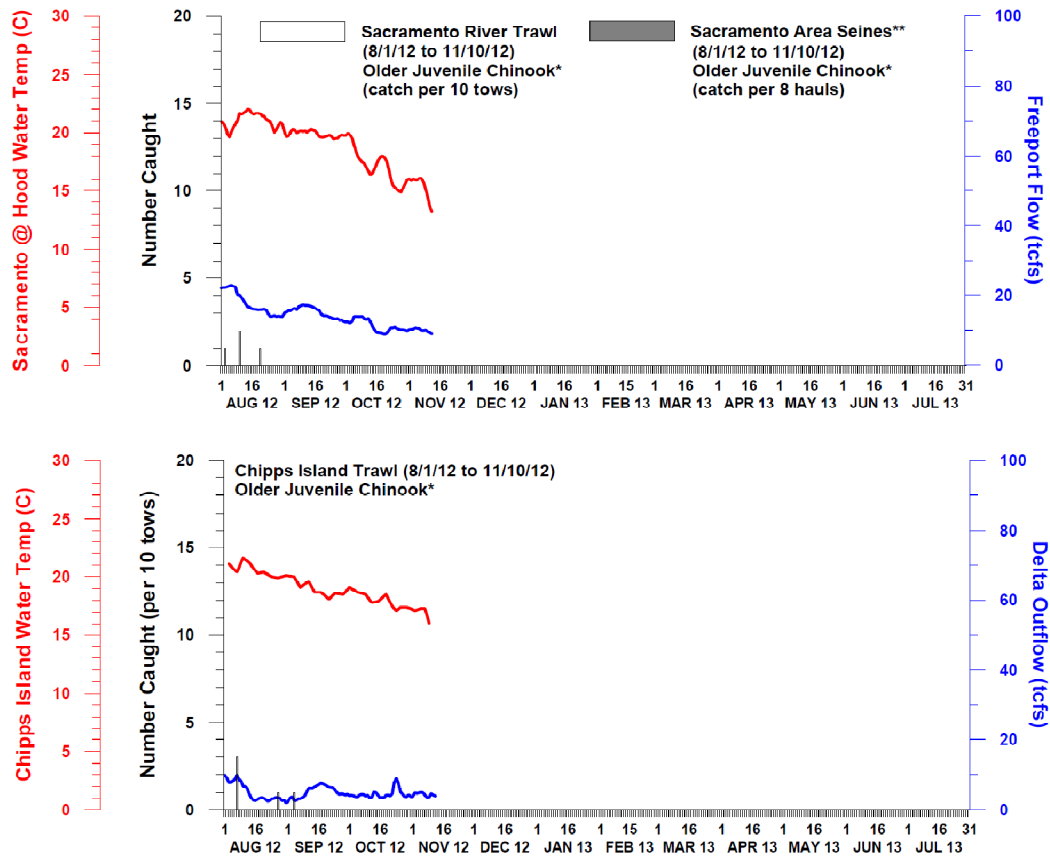
DWR-DES 13 NOV 2012

Preliminary, subject to revision.

*Older juvenile Chinook defined as all Chinook above the minimum length for winter-run (Frank Fisher model).

** 9/14 at Tisdale Weir: One older juvenile caught, but not presented in graph since CPUE could not be calculated because the RR cone clicker malfunctioned.

NUMBER OF OLDER JUVENILE CHINOOK MEASURED IN THE LOWER SACRAMENTO RIVER & CHIPPS ISLAND



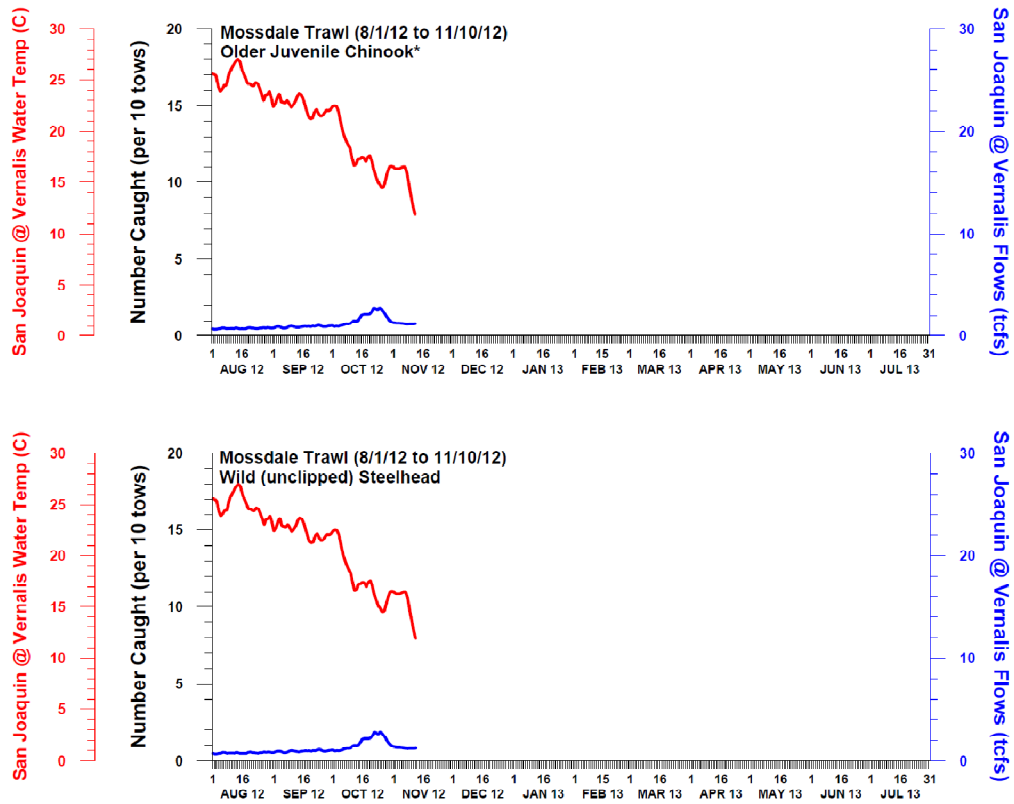
DWR-DES 13 NOV 2012

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**Sacramento area seine route consists of the following seine sites: Verona, Elkhorn, Sand Cove, Discovery Park, American River, Miller Park, Sherwood Harbor, and Garcia Bend.

NUMBER OF OLDER JUVENILE CHINOOK AND STEELHEAD MEASURED IN THE SAN JOAQUIN RIVER



DWR-DES 13 NOV 2012

Preliminary, subject to revision.

*Older juvenile Chinook defined as all Chinook above the minimum length for winter-run (Frank Fisher model).